ABSTRACT

A phospholipid derivative represented by the following formula (I) wherein R¹CO and R²CO independently represent an acyl group; R³ represents hydrogen atom, or a hydrocarbon group; symbol "a" represents an integer of 0 to 4; symbol "b" represents 0 or 1, provided that when a is 0, b is 0; X represents hydrogen atom, an alkali metal atom, an ammonium, or an organic ammonium; A¹O and A³O represent an oxyalkylene group containing oxyethylene group, wherein the ratio of the oxyethylene group to the oxyalkylene group in A¹O and A³O is 0.5 or larger in terms of a weight ratio; A²O represents an oxyalkylene group; symbols "m" and "q" represent an average molar number of added oxyalkylene groups; and symbol "n" represent an average molar number of added oxyalkylene groups; provided that m, n and q satisfy the following conditions: $5 \le m \le 600$, $1 \le n \le 45$, $0 \le q \le 200$, $10 \le m+n+q \le 600$, $0.04 \le n/(m+n+q)$, and $q/(m+n+q) \le 0.8$, which can thicken the water shell of liposome surface by suppressing the spreading of the polyalkylene oxide structure on the surface and thus increase stability of the liposome.